

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
115003-003

Total Pages in this Submission

TO THE COMMISSIONER FOR PATENTS

Mail Stop Patent Application

P.O. Box 1450

Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

ALD APPARATUS AND ALD METHOD FOR MANUFACTURING SEMICONDUCTOR DEVICE

and invented by:

Cheol Ho Shin	Won Hyung Lee
Byoung Ha Cho	Dae Sik Kim
Sang Tae Sim	
Jung Soo Kim	

22141 U.S. PTO
10/661439



If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 22 pages and including the following:
 - a. ☒ Descriptive Title of the Invention
 - b. ☐ Cross References to Related Applications (if applicable)
 - c. ☐ Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
 - e. ☒ Background of the Invention
 - f. ☒ Brief Summary of the Invention
 - g. ☒ Brief Description of the Drawings (if filed)
 - h. ☒ Detailed Description
 - i. ☒ Claim(s) as Classified Below
 - j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☒ Formal Number of Sheets 14
- b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
- a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application,
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under
Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby
incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☐ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
- a. ☐ Computer Readable Form (CFR)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☒ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Certificate of Mailing
- ☐ First Class ☒ Express Mail (Specify Label No.): EV 351197398 US

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Total Pages in this Submission

☐ (Optional) Small Entity Statement(s) - Specify Number of Statements Submitted: _____

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UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)

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Docket No.
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Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	13	- 20 =	0	x \$9.00	\$0.00
Indep. Claims	2	- 3 =	0	x \$42.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$375.00
OTHER FEE (specify purpose)					\$0.00
TOTAL FILING FEE					\$375.00

- ☒ A check in the amount of \$375.00 to cover the filing fee is enclosed.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 02-1818 as described below.
- ☐ Charge the amount of as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: September 11, 2003


Signature

B. Joe Kim
Reg. No. 41,895
Bell, Boyd & Lloyd, LLC
P.O. Box 1135
Chicago, Illinois 60690-1135
(312) 807-4354

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Shin et al.
Appl. No.: Unknown
Filed: Herewith
Title: ALD APPARATUS AND ALD METHOD FOR MANUFACTURING SEMICONDUCTOR
DEVICE
Art Unit: Unknown
Examiner: Unknown
Docket No.: 115003-003

Mail Stop PATENT APPLICATION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING BY EXPRESS MAIL UNDER 37 CFR 1.10

Sir:

I hereby certify that the following documents relating to the above-identified application:

1. Transmittal Letter (4 pages) (in duplicate);
2. Specification (22 pages);
3. Figures (14 sheets);
4. Declaration and Power of Attorney (4 pages);
5. Certified Copy of Korean Priority Document No. 10-2002-0056390;
6. Recordation Form Cover Sheet (2 pages);
7. Assignment (2 pages);
8. Check in the amount of \$40.00;
9. Check in the Amount of \$375.00; and
10. Return Receipt Postcard.

are being deposited with the United States Postal Service with sufficient postage as Express Mail in an envelope addressed to:

Mail Stop PATENT APPLICATION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on September 11, 2003.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

Robert J. Buzzieri

Name of Person Mailing Correspondence

Signature

EV 351197398 US

Express Mail Mailing Label Number